

### **Abstract of the Disclosure**

**[0056]** The invention described relates to a radio positioning system primarily for a mobile telephone network, in which a list of offsets in time, phase, frequency, or derivatives thereof, or their equivalents expressed as offsets in distance or derivatives thereof, of a plurality of transmission source signals, received at a given location, relative to a common reference are generated. Data is acquired from one or more receivers, the positions of which may be known or determined. Such data are offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source in each receiver or to each other. The acquired data is combined for calculating the list of offsets relative to the common reference.